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FOR IMMEDIATE RELEASE

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A new high band, high quality color recording system capable for the first time of providing color instant replays in slow motion and stop action was formally introduced at a press conference held in the New York studios of ABC Television today.

The new system, developed by Ampex Corporation at the request of the American Broadcasting Company for a variety of sports broadcast uses, was demonstrated for the first time on the air Saturday, March 18, when "ABC's Wide World of Sports" televised the "World Series of Skiing" from Vail, Colorado.

The high band color system, which records on metal disks instead of conventional magnetic tape, will also be demonstrated April 2-5 at the National Association of Broadcasters Convention in Chicago.

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Julius Barnathan, ABC vice president of broadcast operations and engineering, and Thomas E. Davis, Ampex vice president - general manager, audio/video communications division, said the new device is the first system capable of color recording and instantaneous replay of televised action at normal, fast and slow speeds down to frame-by-frame stop action.

"The system represents an important advance in broadcasting technology," said Mr. Barnathan. "The color is of extremely high quality, and the slow motion and instant replay features are presented with speed, flexibility and smoothness never before possible even in black and white."

Roone Arledge, vice president and executive producer of ABC Sports, said the development of stop action, slow motion and instant replay in color was particularly important now, since ABC Sports is presenting the most extensive color coverage ever attempted in broadcast history -- Winter and Summer Olympic Games of 1968.

"The use of frame-by-frame stop action and reverse action will give us more flexibility with which to dissect and clearly present to our viewers the performance of an athlete," Mr. Arledge said. "The new technique should greatly enhance interest on the part of viewers watching not only our colorcasts of the Olympics, but also NCAA football, NBA basketball, ABC's golf specials and the many 'Wide World of Sports' events that we televise in color."

Called the HS-100, the new Ampex system records and plays back 30 seconds of action in high band color. For replay of significant action, any part of the 30-second recording may be cued for on-the-air use in four seconds. Mr. Davis pointed out that the HS-100 may also be used effectively for rapid low-cost production of color commercials and special effects material. Its capabilities also include reverse action playback at either normal or slow-motion and frame-by-frame advance for animation or analysis of highlights. Users may choose any slow-motion speed down to stop frame.

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"The HS-100 represents an important new direction for video recording not only for professional broadcasters but for many other fields," according to Mr. Davis. "It is the first model in a new class of rapid access video recording systems with unique capability for 'instant replay' use in education, industry, medicine, government and other fields. Disk systems will complement rather than replace videotape recorders in those areas where fast access and variable playback speeds are more important than long playing time," Mr. Davis said.

Rapid playback of recordings is made possible by use of rare metal disks with extremely long life instead of conventional reels of tape. Disk recordings may be mixed with tape and film recordings in production without degradation of quality.

Ampex developed the world's first practical videotape recorder in 1956 and is the major supplier of video recording equipment for professional broadcasting and closed circuit uses in education, industry, medicine, government and other fields. The HS-100 is the first Ampex video disk system offered for independent use although the disk-recording technique is also employed in the Ampex Videofile document filing and retrieval system.

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HS-100

HIGHBAND, SLOW MOTION VTR

1. Record time - 30 seconds at normal speed - continuously updated
2. Price - \$110,000 - limited production run, available 12 months ARO
3. Playback Speeds
  - a. Normal speed forward
  - b. Normal speed backward
  - c. Slow motion forward continuously variable from normal speed down to stop frame
  - d. Slow motion backward as above
  - e. Playback at twice normal speed - forward or reverse
  - f. Single frame advance or retreat
4. Video Input - 1 volt peak-to-peak either EIA black and white or NTSC at 525/60. Requires continuous sync and burst input for playback. Sync and burst locked during playback for production flexibility.
5. Video Output - standard EIA or NTSC signal, one volt peak-to-peak regardless of playback speed or mode.
6. Video Performance 525/60 High Band

MONOCHROME

Bandwidth:

4.5 MHz - 3db

Response will be within + 1db of these values referenced to 100 kc

Signal-to-Noise Ratio:

40 peak-to-peak video to rms noise (Monochrome and Color)

Transient Response:  
(Utilizing 2T sine<sup>2</sup> pulse)

Maximum K factor 3%

Low Frequency Linearity:

2% Blanking to White (Max)

Rise Time:

0.12 u/sec maximum

(.02 usec or less rise time on input pulse)

COLOR

525/60 HIGH BAND

Bandwidth:

with NTSC input, Luminance

2.5 MHz - 3db

with R-G-B Input, Luminance

4 MHz - 3db

Signal-to-Noise Ratio:

40db peak-to-peak video to rms noise

Differential Gain:

Less than 4% Blanking to White

Differential Phase:

Less than 5° at 3.58 MHz off disc

Moire:

(Color bars 75% modulation, 3.58 MHz)

7. Video (International)

625/50 High Band

MONOCHROME

Bandwidth:

6.0 MHz - 3db

Response will be within + 1db of these values referenced to 100 kc

Signal-to-Noise Ratio:

37 db peak-to-peak video to rms noise

(Monochrome and color)

Maximum K factor 3%

Transient Response:

(Utilizing 2T sine<sup>2</sup> pulse)

Low Frequency Linearity:

2% Blanking to White (Max)

Rise Time:

0.08 u/sec maximum

(0.02 usec or less rise time on input pulse)

(Design work for Pal color correction not yet complete)

8. Physical Characteristics

a. Exclusive of control panel, can be contained in one rack - or packaged for transport per ABC's unit.

b. Total weight - 800 lbs.

c. Power requirement - 117 volts ± 10% - 30 amp - 60 cycle

d. Temperature and Humidity - 0° to 55° C temperature  
30% to 90 % relative humidity

9. Operational Control - operating controls contained in removable desktop control panel including elapsed time indicator. Controls included:





